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Some limit theorems for independent random processes at random points in time and random elements defined by them

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Abstract

The paper deals with random variables which are the values of independent identically distributed stochastic processes at random points in time. We obtain conditions for the weak convergence of their sums, at almost all points in time, to the same infinitely divisible distribution and describe the limit distribution for these sums. Also we obtain an analog of the Donsker theorem and limit theorems for empirical processes for such random variables. ©1996 Plenum Publishing Corporation.